ADAPTIVE NEURAL NETWORK CLASSIFIER FOR EXTRACTED INVARIANTS OF HANDWRITTEN DIGITS

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ABSTRACT

We propose an adaptive activation function of neural network classifier for isolated handwritten digits that undergo basic transformations. The utilised network is a backpropagation network with sigmoid and arctangent activation functions. The performance of the network with both activation functions is compared. The results show that the network applying an adaptive activation function between layers **converged much faster when compared to non-adaptive activation functions with 50% iteration reduction. In this study, we also present** experimental results of feature extraction between Zernike and t5geometric for better feature representations. Results show tha t Zernike features are better at representing isolated handwritten digits compared to t5-geometric features with accuracy of up to 87%.